

Serial No. 10/500,986
Filed: July 6, 2004

REMARKS/ARGUMENTS

Reconsideration of the above application in view of the above amendments and the below remarks is requested.

With the above amendments, applicants have amended claims to further define the invention.

In the Office Action, the Patent Office rejected claims 1 to 6 and 11 to 16 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite; rejected claims 7 to 10 and 17 to 22 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Cadien (US 6375552) in view of Jacquinot (US 6043159); and rejected claims 1 to 6 and 11 to 16 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Jacquinot (US 6043159) in view of Cadien (US 6375552). These rejections are traversed.

With the above amendments, the rejection under 35 U.S.C. § 112, second paragraph, is traversed and withdrawal thereof is requested.

Regarding the rejection of claims 7 to 10 and 17 to 22 as allegedly being unpatentable over Cadien in view of Jacquinot, contrary to the statement by the Patent Office, Cadien does not disclose colloidal silica having a diameter between 5 and 20 nanometers. The only mention of diameter in Cadien is to describe tungsten layer 308 (see column 5, line 36). There is no mention of the diameter of the colloidal silica within Cadien. The term nanometer is not found within Cadien as well. Additionally, there is no mention of individualized particles of colloidal silica not linked to each other by siloxane bonds.

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Additionally, Cadien is concerned with either a slurry to polish back a blanket deposited tungsten film to form plugs or vias, which can also be used to polish copper, tungsten silicide, and titanium nitrate; a slurry, which is a 9:1 dilution of the first slurry for the chemical mechanical polishing of titanium nitride films; or a slurry to polish titanium films. See the abstract of Cadien as well as its Summary of the Invention (column 2, line 57 to column 3, line 11).

Jacquinet describes a chemical mechanical polishing process wherein an abrasive comprising an acid aqueous suspension of individualized particles of colloidal silica having a mean particle size of 3 to 250 nm is used. The additional use of an oxidizing agent is not mentioned. Additionally, Jacquinet is concerned with improving the planarization of silicon dioxide layers in the isolation processes which may be encountered in the production of integrated circuits by using his abrasive comprising an acid aqueous suspension of individualized particles of colloidal silica having a mean particle size of 3 to 250 nm. See column 2, lines 19 to 22.

Thus, on the one hand, Cadien is interested in polishing metal layers and on the other, Jacquinet is interested in the planarization of silicon dioxide layers. Given that there are two different surfaces to be treated by the two documents, there is not motivation or suggestion to combine these documents. Just because disparate elements are known does not mean that it would have been obvious to combine them, absent a teaching, suggestion, or motivation in the documents to do so. Here, there is no teaching, suggestion, or motivation and the Patent Office has not provided any basis therefore.

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Moreover, Cadien does not disclose the silica particles of the diameter of applicants' claims nor that the individualized particles of colloidal silica not linked to each other by siloxane bonds. Without some disclosure or motivation within Cadien, the only way by which the Patent Office could combine Cadien in view of Jacquinot is to use applicants' present application to support such a combination. That, of course, is not permitted.

Also in the Office Action, the Patent Office rejected claims 1 to 6 and 11 to 16 as allegedly being unpatentable over Jacquinot in view of Cadien.

Both Jacquinot and Cadien are discussed above. As shown above, there is no motivation, suggestion or teaching to combine these documents.

As such, the two rejections of applicants' claims over Cadien in view of Jacquinot or Jacqu not in view of Cadien are traversed and withdrawal of the rejection is requested.

Applicants also enclose a three (3) month extension of time.

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Applicants submit that the concerns of the Patent Office have been addressed.
Withdrawal of the rejections and issuance of a Notice of Allowance is respectfully
solicited.

Respectfully submitted,



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